THE JOURNAL OF EXPERIMENTAL MEDICINE

Published Monthly by The Rockefeller University Press

Edited by

Zanvil A. Cohn
Alan N. Houghton
Maclyn McCarty
Carl Nathan
David N. Posnett
Jeffrey V. Ravetch
Ralph Steinman

Assistant Editor

William A. Muller

Advisory Editors

Alan Aderem
James P. Allison
Chester A. Alper
Frederick W. Alt
K. Frank Austen
Marco Baggiolini
Bruce Beutler
Michael J. Bevan
Thierry Boon
Thomas J. Braciale
Patrick Brennan
Michael B. Brenner
Hal E. Broxmeyer
Kathryn Calame
Anthony Cerami
Ramzi S. Cotran
Frank J. Dixon
Anthony S. Fauci
Douglas T. Fearon
Bernard N. Fields
Vincent A. Fischetti
B. J. Fowlkes
Shu Man Fu
Stephen J. Galli
Ronald N. Germain
Laurie H. Glimcher
Siamon Gordon
Emil C. Gotschlich
Sergio Grinstein
David D. Ho
Richard J. Hodes
Tasuku Honjo
John W. Kappler
Paul W. Kincade
Seymour J. Klebanoff
Michael S. Krangel
Antonio Lanzavecchia
Richard M. Locksley
H. R. MacDonald
Linda MacPhail
Tak W. Mak
Tim Manser
Philippa Marrack
Janet Maryanski
Don Mason
Lloyd F. Mayer
E. A. McCulloch
Ira Mellman
Donald Metcalf
Louis H. Miller
Ralph L. Nachman
Robert J. North
Victor Nussenzweig
Lloyd J. Old
Michael B. A. Oldstone
Peter Parham
David C. Parker
William E. Paul
Hidde Ploegh
Daniel A. Portnoy
Ellen Puré
Klaus Rajewsky
Russell Ross
David H. Sachs
Lawrence E. Samelson
Matthew D. Scharff
Hans Schreiber
Gerold Schuler
Benjamin D. Schwartz
Rafick-P. Sékaly
Stephen Shaw
Ken D. Shortman
Roy L. Silverstein
Kendall A. Smith
Jonathan Sprent
Timothy A. Springer
Eng M. Tan
Alain Townsend
Giorgio Trinchieri
Helen Vlassara
Arthur Weiss
Zena Werb
Linda S. Wicker
Darcy B. Wilson
Henry J. Winn
Owen N. Witte
Samuel D. Wright
John Ding-E Young

VOLUME 178

1993

COPYRIGHT © 1993 BY THE ROCKEFELLER UNIVERSITY PRESS

Contents

Volume 178 No. 1 July 1, 1993

1 ***Steven Porcelli, Courtland E. Yockey, Michael B. Brenner, and Steven P. Balk.*** Analysis of T cell antigen receptor (TCR) expression by human peripheral blood $CD4^-8^-$ α/β T cells demonstrates preferential use of several $V\beta$ genes and an invariant TCR α chain

17 ***Maria A. Minutello, Piero Pileri, Derya Unutmaz, Stefano Censini, George Kuo, Michael Houghton, Maurizia R. Brunetto, Ferruccio Bonino, and Sergio Abrignani.*** Compartmentalization of T lymphocytes to the site of disease: intrahepatic $CD4^+$ T cells specific for the protein NS4 of hepatitis C virus in patients with chronic hepatitis C

27 ***Roman M. Chicz, Robert G. Urban, Joan C. Gorga, Dario A. A. Vignali, William S. Lane, and Jack L. Strominger.*** Specificity and promiscuity among naturally processed peptides bound to HLA-DR alleles

49 ***M. J. Fritzler, J. C. Hamel, R. L. Ochs, and E. K. L. Chan.*** Molecular characterization of two human autoantigens: unique cDNAs encoding 95- and 160-kD proteins of a putative family in the Golgi complex

63 ***Tsuyoshi Kasama, Robert M. Strieter, Theodore J. Standiford, Marie D. Burdick, and Steven L. Kunkel.*** Expression and regulation of human neutrophil-derived macrophage inflammatory protein 1α

73 ***George E. Loss, Jr., Chester G. Elias, Patrick E. Fields, Randall K. Ribaudo, Maureen McKisic, and Andrea J. Sant.*** Major histocompatibility complex class II–restricted presentation of an internally synthesized antigen displays cell-type variability and segregates from the exogenous class II and endogenous class I presentation pathways

87 ***Micha J. Rapoport, Andrés Jaramillo, Danny Zipris, Alan H. Lazarus, David V. Serreze, Edward H. Leiter, Paul Cyopick, Jane S. Danska, and Terry L. Delovitch.*** Interleukin 4 reverses T cell proliferative unresponsiveness and prevents the onset of diabetes in nonobese diabetic mice

101 ***Anuraj H. Shankar and Richard G. Titus.*** *Leishmania major*–specific, $CD4^+$, major histocompatibility complex class II–restricted T cells derived in vitro from lymphoid tissues of naive mice

113 ***Sem Saeland, Valérie Duvert, Isabelle Moreau, and Jacques Banchereau.*** Human B cell precursors proliferate and express CD23 after CD40 ligation

121 ***Kheïra Beldjord, Cherif Beldjord, Elisabeth Macintyre, Philippe Even, and François Sigaux.*** Peripheral selection of $V\delta1^+$ cells with restricted T cell receptor δ gene junctional repertoire in the peripheral blood of healthy donors

129 ***Yoshio Wakatsuki and Warren Strober.*** Effect of downregulation of germline transcripts on immunoglobulin A isotype differentiation

139 ***Mary E. Pauza, Julie A. Rehmann, and Tucker W. LeBien.*** Unusual patterns of immunoglobulin gene rearrangement and expression during human B cell ontogeny: human B cells can simultaneously express cell surface κ and λ light chains

151 ***Antonella Stoppacciaro, Cecilia Melani, Mariella Parenza, Antonio Mastracchio, Cinzia Bassi, Carlo Baroni, Giorgio Parmiani, and Mario P. Colombo.*** Regression of an established tumor genetically modified to release granulocyte colony-stimulating factor requires granulocyte–T cell cooperation and T cell–produced interferon γ

163 ***Oliver Planz, Thomas Bilzer, Martin Sobbe, and Lothar Stitz.*** Lysis of major histocompatibility complex class I–bearing cells in Borna disease virus–induced degenerative encephalopathy

175 ***Lise Wogensen, Xiaojian Huang, and Nora Sarvetnick.*** Leukocyte extravasation into the pancreatic tissue in transgenic mice expressing interleukin 10 in the islets of Langerhans

187 ***Knut E. A. Lundin, Helge Scott, Torbjørn Hansen, Gunnar Paulsen, Trond S. Halstensen, Olav Fausa, Erik Thorsby, and Ludvig M. Sollid.*** Gliadin-specific, HLA-DQ ($\alpha1^*0501,\beta1^*0201$) restricted T cells isolated from the small intestinal mucosa of celiac disease patients

197 ***C. Kendall Stover, Geetha P. Bansal, Mark S. Hanson, Jeanne E. Burlein, Susan R. Palaszynski, James F. Young, Scott Koenig, Douglas B. Young, Ariadna Sadziene, and Alan G. Barbour.*** Protective immunity elicited by recombinant bacille Calmette-Guerin (BCG) expressing outer surface protein A (OspA) lipoprotein: a candidate Lyme disease vaccine

211 ***Glenn T. Miller, Paula S. Hochman, Werner Meier, Richard Tizard, Sarah A. Bixler, Margaret D. Rosa, and Barbara P. Wallner.*** Specific interaction of lymphocyte function-associated antigen 3 with CD2 can inhibit T cell responses

223 ***M. Sykes, M. W. Harty, F. M. Karlhofer, D. A. Pearson, Gregory Szot, and W. Yokoyama.*** Hematopoietic cells and radioresistant host elements influence natural killer cell differentiation

231 ***William J. Murphy, Scott K. Durum, and Dan L. Longo.*** Differential effects of growth hormone and prolactin on murine T cell development and function

237 ***Philip J. Morrissey, Keith Charrier, Steven Braddy, Denny Liggitt, and James D. Watson.*** $CD4^+$ T cells that express high levels of CD45RB induce wasting disease when transferred into congenic severe combined immunodeficient mice. Disease development is prevented by cotransfer of purified $CD4^+$ T cells

245 ***Steven D. Levin, Kristin M. Abraham, Steven J. Anderson, Katherine A. Forbush, and Roger M. Perlmutter.*** The protein tyrosine $p56^{lck}$ regulates thymocyte development independently of its interaction with CD4 and CD8 coreceptors

257 ***Kenneth H. Grabstein, Thomas J. Waldschmidt, Fred D. Finkelman, Bruce W. Hess, Alan R. Alpert, Norman E. Boiani, Anthony E. Namen, and Philip J. Morrissey.*** Inhibition of murine B and T lymphopoiesis in vivo by an anti-interleukin 7 monoclonal antibody

265 ***Daniel L. Kraft, Irving L. Weissman, and Edmund K. Waller.*** Differentiation of $CD3^-4^-8^-$ human fetal thymocytes in vivo: characterization of a $CD3^-4^+8^-$ intermediate

279 ***Taco W. Kuijpers, Erik P. J. Mul, Michela Blom, Nick L. Kovach, Federico C. A. Gaeta, Vanessa Tollefson, Mariano J. Elices, and John M. Harlan.*** Freezing adhesion molecules in a state of high-avidity binding blocks eosinophil migration

285 ***Homayoun Hossein Zadeh and Irving Goldschneider.*** Demonstration of large-scale migration of cortical thymocytes to peripheral lymphoid tissues in cyclosporin A–treated rats

295 ***M. G. McHeyzer-Williams, M. J. McLean, P. A. Lalor, and G. J. V. Nossal.*** Antigen-driven B cell differentiation in vivo

309 ***Georges Leclercq, Jean Plum, Dipankar Nandi, Magda De Smedt, and James P. Allison.*** Intrathymic differentiation of $V\gamma3$ T cells

317 ***Douglas A. Levinson, Juanita Campos-Torres, and Philip Leder.*** Molecular characterization of transgene-induced immunodeficiency in *B-less* mice using a novel quantitative limiting dilution polymerase chain reaction method

Brief Definitive Reports

331 ***Jan L. Hillson, Nancy S. Karr, Ina R. Oppliger, Mart Mannik, and Eric H. Sasso.*** The structural basis of germline-encoded V_H3 immunoglobulin binding to staphylococcal protein A

337 ***N. Suttorp, M. Fuhrmann, S. Tannert-Otto, F. Grimminger, and S. Bhakdi.*** Pore-forming bacterial toxins potently induce release of nitric oxide in porcine endothelial cells

343 ***Katalin V. Lukacs, Douglas B. Lowrie, Richard W. Stokes, and M. Joseph Colston.*** Tumor cells transfected with a bacterial heat-shock gene lose tumorigenicity and induce protection against tumors

349 ***Xi Yang, Randall S. Gieni, Tim R. Mosmann, and Kent T. HayGlass.*** Chemically modified antigen preferentially elicits induction of Th1-like cytokine synthesis patterns in vivo

355 ***Zhihai Qin, Sabine Krüger-Krasagakes, Ulrich Kunzendorf, Hanno Hock, Tibor Diamantstein, and Thomas Blankenstein.*** Expression of tumor necrosis factor by different tumor cell lines results either in tumor suppression or augmented metastasis

361 ***P. Hwu, G. E. Shafer, J. Treisman, D. G. Schindler, G. Gross, R. Cowherd, S. A. Rosenberg, and Z. Eshhar.*** Lysis of ovarian cancer cells by human lymphocytes redirected with a chimeric gene composed of an antibody variable region and the Fc receptor γ chain

367 ***Robert F. Bargatze and Eugene C. Butcher.*** Rapid G protein–regulated activation event involved in lymphocyte binding to high endothelial venules

Volume 178 No. 2 August 1, 1993

373 ***Thomas Armbrust, Stefan Schwögler, Gregor Zöhrens, and Giuliano Ramadori.*** C1 esterase inhibitor gene expression in rat Kupffer cells, peritoneal macrophages and blood monocytes: modulation by interferon γ

381 ***Rossella Manfredini, Alexis Grande, Enrico Tagliafico, Daniela Barbieri, Patrizia Zucchini, Gennaro Citro, Gabriella Zupi, Claudio Franceschi, Umberto Torelli, and Sergio Ferrari.*** Inhibition of *c-fes* expression by an antisense oligomer causes apoptosis of HL60 cells induced to granulocytic differentiation

391 ***Anne Galy, Sunita Verma, Alicia Bárcena, and Hergen Spits.*** Precursors of $CD3^+CD4^+CD8^+$ cells in the human thymus are defined by expression of CD34. Delineation of early events in human thymic development

403 ***Hans H. Hirsch, Asha P. K. Nair, and Christoph Moroni.*** Suppressible and nonsuppressible autocrine mast cell tumors are distinguished by insertion of an endogenous retroviral element (IAP) into the interleukin 3 gene

413 ***Sten E. W. Jacobsen, Ole P. Veiby, and Erlend B. Smeland.*** Cytotoxic lymphocyte maturation factor (interleukin 12) is a synergistic growth factor for hematopoietic stem cells

419 ***Frank Alderuccio, Ban-Hock Toh, Seong-Seng Tan, Paul A. Gleeson, and Ian R. van Driel.*** An autoimmune disease with multiple molecular targets abrogated by the transgenic expression of a single autoantigen in the thymus

427 ***Arne N. Akbar, Nicola Borthwick, Michael Salmon, Wendy Gombert, Margarita Bofill, Nazarin Shamsadeen, Darrell Pilling, Sarah Pett, Jane E. Grundy, and George Janossy.*** The significance of low bcl-2 expression by CD45RO T cells in normal individuals and patients with acute viral infections. The role of apoptosis in T cell memory

439 ***Isao Miyazaki, Roy K. Cheung, and Hans-Michael Dosch.*** Viral interleukin 10 is critical for the induction of B cell growth transformation by Epstein-Barr virus

449 ***William A. Muller, Susan A. Weigl, Xiaohui Deng, and David M. Phillips.*** PECAM-1 is required for transendothelial migration of leukocytes

461 ***Jianguo Wu, Tong Zhou, Jin He, and John D. Mountz.*** Autoimmune disease in mice due to integration of an endogenous retrovirus in an apoptosis gene

469 ***Hajime Karasuyama, Antonius Rolink, and Fritz Melchers.*** A complex of glycoproteins is associated with V_{preB}/λ_5 surrogate light chain on the surface of μ heavy chain-negative early precursor B cell lines

479 ***Kayo Inaba, Muneo Inaba, Makoto Naito, and Ralph M. Steinman.*** Dendritic cell progenitors phagocytose particulates, including Bacillus Calmette-Guerin organisms, and sensitize mice to mycobacterial antigens in vivo

489 ***Vincent Brichard, Aline Van Pel, Thomas Wölfel, Catherine Wölfel, Etienne De Plaen, Bernard Lethé, Pierre Coulie, and Thierry Boon.*** The tyrosinase gene codes for an antigen recognized by autologous cytolytic T lymphocytes on HLA-A2 melanomas.

497 ***Robert L. Camp, Annika Scheynius, Catharina Johansson, and Ellen Puré.*** CD44 is necessary for optimal contact allergic responses but is not required for normal leukocyte extravasation

509 ***Caetano Reis e Sousa, Philip D. Stahl, and Jonathan M. Austyn.*** Phagocytosis of antigens by Langerhans cells in vitro

521 ***Thomas Matthes, Christiane Werner-Favre, Huayang Tang, Xiaohong Zhang, Vincent Kindler, and Rudolf H. Zubler.*** Cytokine mRNA expression during an in vitro response of human B lymphocytes: kinetics of B cell tumor necrosis factor α, interleukin (IL)6, IL-10, and transforming growth factor β_1 mRNAs

529 ***T. Moritz, D. C. Keller, and D. A. Williams.*** Human cord blood cells as targets for gene transfer: potential use in genetic therapies of severe combined immunodeficiency disease

537 ***Manuel López-Cabrera, Ana G. Santis, Elena Fernández-Ruiz, Russ Blacher, Fred Esch, Paloma Sánchez-Mateos, and Francisco Sánchez-Madrid.*** Molecular cloning, expression, and chromosomal localization of the human earliest lymphocyte activation antigen AIM/CD69, a new member of the C-type animal lectin superfamily of signal-transmitting receptors

549 ***Chamorro Somoza, Paul C. Driscoll, Jason G. Cyster, and Alan F. Williams.*** Mutational analysis of the CD2/CD58 interaction: the binding site for CD58 lies on one face of the first domain of human CD2

559 ***Samia J. Khoury, Mohamed H. Sayegh, Wayne W. Hancock, Lorenzo Gallon, Charles B. Carpenter, and Howard L. Weiner.*** Acquired tolerance to experimental autoimmune encephalomyelitis by intrathymic injection of myelin basic protein or its major encephalitogenic peptide

567 ***Tanya M. Scharton and Phillip Scott.*** Natural killer cells are a source of interferon γ that drives differentiation of $CD4^+$ T cell subsets and induces early resistance to *Leishmania major* in mice

579 ***Ellinor I. B. Peerschke, Kenneth B. M. Reid, and Berhane Ghebrehiwet.*** Platelet activation by C1q results in the induction of α_{IIb}/β_3 integrins (GPIIb-IIIa) and the expression of P-selectin and procoagulant activity

589 ***Terri M. Laufer, Matthias G. von Herrath, Michael J. Grusby, Michael B. A. Oldstone, and Laurie H. Glimcher.*** Autoimmune diabetes can be induced in transgenic major histocompatibility complex class II–deficient mice

597 ***Alessandro Moretta, Massimo Vitale, Cristina Bottino, Anna Maria Orengo, Luigia Morelli, Raffaella Auguglairo, Maurizio Barbaresi, Ermanno Ciccone, and Lorenzo Moretta.*** P58 molecules as putative receptors for major histocompatibility complex (MHC) class I molecules in human natural killer (NK) cells. Anti-p58 antibodies reconstitute lysis of MHC class I–protected cells in NK clones displaying different specificities

605 ***Yoram Vodovotz, Christian Bogdan, John Paik, Qiao-wen Xie, and Carl Nathan.*** Mechanisms of suppression of macrophage nitric oxide release by transforming growth factor β

615 ***Howard T. Petrie, Ferenc Livak, David G. Schatz, Andreas Strasser, I. Nicholas Crispe, and Ken Shortman.*** Multiple rearrangements in T cell receptor α chain genes maximize the production of useful thymocytes

623 ***Michael S. Mulligan, John B. Lowe, Robert D. Larsen, James Paulson, Zhong-li Zheng, Shawn DeFrees, Kentaro Maemura, Minoru Fukuda, and Peter A. Ward.*** Protective effects of sialylated oligosaccharides in immune complex–induced acute lung injury

633 ***Nina Bhardwaj, James W. Young, Anahid J. Nisanian, Jan Baggers, and Ralph M. Steinman.*** Small amounts of superantigen, when presented on dendritic cells, are sufficient to initiate T cell responses

643 ***Robin F. Lin, Tien-Sung Lin, Ronald G. Tilton, and Anne H. Cross.*** Nitric oxide localized to spinal cords of mice with experimental allergic encephalomyelitis: an electron paramagnetic resonance study

649 ***Paul D. Kassner and Martin E. Hemler.*** Interchangeable α chain cytoplasmic domains play a positive role in control of cell adhesion mediated by VLA-4, a β_1 integrin

661 ***Mi-Hua Tao, Richard I. F. Smith, and Sherie L. Morrison.*** Structural features of human immunoglobulin G that determine isotype-specific differences in complement activation

669 ***Mark R. Alderson, Richard J. Armitage, Teresa W. Tough, Laura Strockbine, William C. Fanslow, and Melanie K. Spriggs.*** CD40 expression by human monocytes: regulation by cytokines and activation of monocytes by the ligand for CD40

675 ***Jochen Buck, Felix Grün, Fadila Derguini, Yq Chen, Shoji Kimura, Noa Noy, and Ulrich Hämmerling.*** Anhydroretinol: a naturally occurring inhibitor of lymphocyte physiology

681 ***Wesley C. Van Voorhis, Lynn Barrett, Raymond Koelling, and Andrew G. Farr.*** FL-160 proteins of *Trypanosoma cruzi* are expressed from a multigene family and contain two distinct epitopes that mimic nervous tissues

695 ***Carl L. Manthey, Nilofer Qureshi, Peter L. Stütz, and Stefanie N. Vogel.*** Lipopolysaccharide antagonists block taxol-induced signaling in murine macrophages

703 ***Paul J. Martin.*** Donor CD8 cells prevent allogeneic marrow graft rejection in mice: potential implications for marrow transplantation in humans

713 ***Elliot W. Ehrich, Brigitte Devaux, Edwin P. Rock, Jeffrey L. Jorgensen, Mark M. Davis, and Yueh-hsiu Chien.*** T cell receptor interaction with peptide/major histocompatibility complex (MHC) and superantigen/MHC ligands is dominated by antigen

723 ***Jia-Li Chu, Jorn Drappa, Andrew Parnassa, and Keith B. Elkon.*** The defect in *Fas* mRNA expression in MRL/*lpr* mice is associated with insertion of the retrotransposon, *ETn*

Brief Definitive Reports

731 ***Richard R. Olson, Jeffrey J. Reuter, and Kris Scalf.*** Cell surface expression and function of an HLA class II molecule with class I domain configuration

737 ***Karina Yazdanbakhsh, Chae Gyu Park, Gary M. Winslow, and Yongwon Choi.*** Direct evidence for the role of COOH terminus of mouse mammary tumor virus superantigen in determining T cell receptor Vβ specificity

743 ***Luis J. Montaner, Anthony G. Doyle, Matthew Collin, George Herbein, Peter Illei, William James, Adrian Minty, Daniel Caput, Pascual Ferrara, and Siamon Gordon.*** Interleukin 13 inhibits human immunodeficiency virus type 1 production in primary blood-derived human macrophages in vitro

749 ***Nancy McCartney-Francis, Janice B. Allen, Diane E. Mizel, Jorge E. Albina, Qiao-wen Xie, Carl F. Nathan, and Sharon M. Wahl.*** Suppression of arthritis by an inhibitor of nitric oxide synthase

755 ***Sam R. Telford III, Erol Fikrig, Stephen W. Barthold, Laura Rosa Brunet, Andrew Spielman, and Richard A. Flavell.*** Protection against antigenically variable *Borrelia burgdorferi* conferred by recombinant vaccines

759 ***Richard Poon-King, Jason Bannan, Ann Viteri, Gil Cu, and John B. Zabriskie.*** Identification of an extracellular plasmin binding protein from nephritogenic streptococci.

765 ***Correction***

Volume 178 No. 3 September 1, 1993

769 ***Margarete Eichhorn, Terence D. Prospero, Volker T. Heussler, and Dirk A. E. Dobbelaere.*** Antibodies against major histocompatibility complex class II antigens directly inhibit the growth of T cells infected with *Theileria parva* without affecting their state of activation

777 ***Andreas Wollenberg, Henri de la Salle, Daniel Hanau, Fu-Tong Liu, and Thomas Bieber.*** Human keratinocytes release the endogenous β-galactoside-binding soluble lectin immunoglobulin E (IgE-binding protein) which binds to Langerhans cells where it modulates their binding capacity for IgE glycoforms

787 ***Peter M. Lansdorp, Wieslawa Dragowska, and Hector Mayani.*** Ontogeny-related changes in proliferative potential of human hematopoietic cells

793 ***Patricia L. Podolin, Alison Pressey, Nicole H. DeLarato, Paul A. Fischer, Laurence B. Peterson, and Linda S. Wicker.*** I-E$^+$ nonobese diabetic mice develop insulitis and diabetes

805 ***Julie Desbarats and Wayne S. Lapp.*** Thymic selection and thymic major histocompatibility complex class II expression are abnormal in mice undergoing graft-versus-host reactions

815 ***Kristin R. Hinds-Frey, Hikaru Nishikata, Ronda T. Litman, and Gary W. Litman.*** Somatic variation precedes extensive diversification of germline sequences and combinatorial joining in the evolution of immunoglobulin heavy chain diversity

825 ***R. N. Haire, R. D. Buell, R. T. Litman, Y. Ohta, S. M. Fu, T. Honjo, F. Matsuda, M. de la Morena, J. Carro, R. A. Good, and G. W. Litman.*** Diversification, not use, of the immunoglobulin V_H gene repertoire is restricted in DiGeorge syndrome

835 ***Donald A. Rowley and Renée M. Stach.*** A first or dominant immunization. I. Suppression of simultaneous cytolytic T cell responses to unrelated alloantigens

841 ***Renée M. Stach and Donald A. Rowley.*** A first or dominant immunization. II. Induced immunoglobulin carries transforming growth factor β and suppresses cytolytic T cell responses to unrelated alloantigens

853 ***Bruce Walcheck, Gayle Watts, and Mark A. Jutila.*** Bovine γ/δ T cells bind E-selectin via a novel glycoprotein receptor: first characterization of a lymphocyte/E-selectin interaction in an animal model

865 ***Lisa Staiano-Coico, James G. Krueger, Jeffrey S. Rubin, Samy D'limi, Val Pierre Vallat, Linda Valentino, Thomas Fahey III, Arthur Hawes, Gina Kingston, Michael R. Madden, Mary Mathwich, Alice B. Gottlieb, and Stuart A. Aaronson.*** Human keratinocyte growth factor effects in a porcine model of epidermal wound healing

879 ***J. M. Brooks, R. J. Murray, W. A. Thomas, M. G. Kurilla, and A. B. Rickinson.*** Different HLA-B27 subtypes present the same immunodominant Epstein-Barr virus peptide

889 ***Christine McMenamin and Patrick G. Holt.*** The natural immune response to inhaled soluble protein antigens involves major histocompatibility complex (MHC) class I–restricted $CD8^+$ T cell-mediated but MHC class II–restricted $CD4^+$ T cell–dependent immune deviation resulting in selective suppression of immunoglobulin E production

901 ***Mark Bix, Mark Coles, and David Raulet.*** Positive selection of $V\beta8^+CD4^-8^-$ thymocytes by class I molecules expressed by hematopoietic cells

909 ***Vipin Kumar and Eli E. Sercarz.*** The involvement of T cell receptor peptide–specific regulatory $CD4^+$ T cells in recovery from antigen-induced autoimmune disease

917 ***Eva Rozdzinski, W. Neal Burnette, Theodore Jones, Vernon Mar, and Elaine Tuomanen.*** Prokaryotic peptides that block leukocyte adherence to selectins

925 ***John Maltman, Ian B. Pragnell, and Gerard J. Graham.*** Transforming growth factor β: is it a downregulator of stem cell inhibition by macrophage inflammatory protein 1α?

933 ***Steven Seung, James L. Urban, and Hans Schreiber.*** A tumor escape variant that has lost one major histocompatibility complex class I restriction element induces specific $CD8^+$ T cells to an antigen that no longer serves as a target

941 ***Deborah B. Landry, James D. Engel, and Ranjan Sen.*** Functional GATA-3 binding sites within murine $CD8\alpha$ upstream regulatory sequences

951 ***Yue-Sheng Li, Kyoko Hayakawa, and Richard R. Hardy.*** The regulated expression of B lineage associated genes during B cell differentiation in bone marrow and fetal liver

961 ***Mauro S. Malnati, Paolo Lusso, Ermanno Ciccone, Alessandro Moretta, Lorenzo Moretta, and Eric O. Long.*** Recognition of virus-infected cells by natural killer cell clones is controlled by polymorphic target cell elements

971 ***Marianne J. Skeen and H. Kirk Ziegler.*** Induction of murine peritoneal γ/δ T cells and their role in resistance to bacterial infection

985 ***Marianne J. Skeen and H. Kirk Ziegler.*** Intercellular interactions and cytokine responsiveness of peritoneal α/β and γ/δ T cells from *Listeria*-infected mice: synergistic effects of interleukin 1 and 7 on γ/δ T cells

997 ***Cezary Szczylik, Tomasz Skorski, De-Hui Ku, Nicholas C. Nicolaides, Shau-Ching Wen, Lidia Rudnicka, Antonio Bonati, Lucia Malaguarnera, and Bruno Calabretta.*** Regulation of proliferation and cytokine expression of bone marrow fibroblasts: role of c-*myb*

1007 ***Jacqueline L. Pennycook, Yenhui Chang, Jakub Celler, Robert A. Phillips, and Gillian E. Wu.*** High frequency of normal DJ_H joints in B cell progenitors in severe combined immunodeficiency mice

1017 ***B. Keith English, James N. Ihle, Angela Myracle, and Taolin Yi.*** *Hck* tyrosine kinase activity modulates tumor necrosis factor production by murine macrophages

1023 ***Daniel Billadeau, Greg Ahmann, Phillip Greipp, and Brian Van Ness.*** The bone marrow of multiple myeloma patients contains B cell populations at different stages of differentiation that are clonally related to the malignant plasma cell

1033 ***F. T. Christiansen, C. S. Witt, E. Ciccone, D. Townend, D. Pende, D. Viale, L. J. Abraham, R. L. Dawkins, and L. Moretta.*** Human natural killer (NK) alloreactivity and its association with the major histocompatibility complex: ancestral haplotypes encode particular NK-defined haplotypes

1041 ***Annalisa D'Andrea, Miguel Aste-Amezaga, Nicholas M. Valiante, Xiaojing Ma, Marek Kubin, and Giorgio Trinchieri.*** Interleukin 10 (IL-10) inhibits human lymphocyte interferon γ-production by suppressing natural killer cell stimulatory factor/IL-12 synthesis in accessory cells

1049 ***Mercedes Sanchez, Ziva Misulovin, Anne L. Burkhardt, Sandeep Mahajan, Thais Costa, Roland Franke, Joseph B. Bolen, and Michel Nussenzweig.*** Signal transduction by immunoglobulin is mediated through Igα and Igβ

1057 ***Andrew D. Luster and Philip Leder.*** IP-10, a -C-X-C- chemokine, elicits a potent thymus-dependent antitumor response in vivo

1067 ***Una O'Doherty, Ralph M. Steinman, Michael Peng, Paul U. Cameron, Stuart Gezelter, Iris Kopeloff, William J. Swiggard, Melissa Pope, and Nina Bhardwaj.*** Dendritic cells freshly isolated from human blood express CD4 and mature into typical immunostimulatory dendritic cells after culture in monocyte-conditioned medium

Brief Definitive Reports

1079 ***Michael E. Matos, Gregory S. Schnier, Michael S. Beecher, Leonie K. Ashman, Douglas E. Williams, and Michael A. Caligiuri.*** Expression of a functional c-*kit* receptor on a subset of natural killer cells

1085 ***Mark I. Block, Maria Berg, Michael J. McNamara, Jeffrey A. Norton, Douglas L. Fraker, and H. Richard Alexander.*** Passive immunization of mice against D factor blocks lethality and cytokine release during endotoxemia

1091 ***Paolo Corradini, Mario Boccadoro, Claudia Voena, and Alessandro Pileri.*** Evidence for a bone marrow B cell transcribing malignant plasma cell VDJ joined to Cμ sequence in immunoglobulin (IgG)-and IgA-secreting multiple myelomas

1097 ***Shigeaki Nonoyama, Diane Hollenbaugh, Alejandro Aruffo, Jeffrey A. Ledbetter, and Hans D. Ochs.*** B cell activation via CD40 is required for specific antibody production by antigen-stimulated human B cells

1103 ***Toshiyuki Tanaka, Fujiko Kitamura, Yasuhiko Nagasaka, Keisuke Kuida, Hiroshi Suwa, and Masayuki Miyasaka.*** Selective long-term elimination of natural killer cells in vivo by an anti–interleukin 2 receptor β chain monoclonal antibody in mice

1109 ***Christine Heufler, Gerda Topar, Alfred Grasseger, Ursula Stanzl, Franz Koch, Nikolaus Romani, Anthony E. Namen, and Gerold Schuler.*** Interleukin 7 is produced by murine and human keratinocytes

1115 ***Asit Panja, Richard S. Blumberg, Steven P. Balk, and Lloyd Mayer.*** CD1d is involved in T cell–intestinal epithelial cell interactions

1121 ***Hassina Maïza, Gérald Leca, Indra-Gusti Mansur, Valérie Schiavon, Laurence Boumsell, and Armand Bensussan.*** A noval 80-kD cell surface structure identifies human circulating lymphocytes with natural killer activity

1127 ***Andreas H. Sarris, Hal E. Broxmeyer, Urs Wirthmueller, Nikos Karasavvas, Scott Cooper, Li Lu, James Krueger, and Jeffrey V. Ravetch.*** Human interferon-inducible protein 10: expression and purification of recombinant protein demonstrate inhibition of early human hematopoietic progenitors

1133 ***Correction***

1135 ***Correction***

Volume 178 No. 4 October 1, 1993

1139 ***Juan Carlos Zúñiga-Pflücker, Heather L. Schwartz, and Michael J. Lenardo.*** Gene transcription in differentiating immature T cell receptor^{neg} thymocytes resembles antigen-activated mature T cells

1151 ***Sharilyn K. Stanley, Joseph M. McCune, Hideto Kaneshima, J. Shawn Justement, Margery Sullivan, Elizabeth Boone, Michael Baseler, Joe Adelsberger, Mark Bonyhadi, Jan Orenstein, Cecil H. Fox, and Anthony S. Fauci.*** Human immunodeficiency virus infection of the human thymus and disruption of the thymic microenvironment in the SCID-hu mouse

1165 ***Mingjie Zhou and Eric J. Brown.*** Leukocyte response integrin and integrin-associated protein act as a signal transduction unit in generation of a phagocyte respiratory burst

1175 ***Robert G. Hawley, Andrew Z. C. Fong, Bo Y. Ngan, Véronique M. de Lanux, Steven C. Clark, and Teresa S. Hawley.*** Progenitor cell hyperplasia with rare development of myeloid leukemia in interleukin 11 bone marrow chimeras

1189 ***Ramón Merino, Masahiro Iwamoto, Liliane Fossati, Pedro Muniesa, Kimi Araki, Satoru Takahashi, Joaquín Huarte, Ken-Ichi Yamamura, Jean-Dominique Vassalli, and Shozo Izui.*** Prevention of systemic lupus erythematosus in autoimmune BXSB mice by a transgene encoding I-E α chain

1199 ***Manolo Izquierdo, Sally J. Leevers, Chris J. Marshall, and Doreen Cantrell.*** p21^{ras} couples the T cell antigen receptor to extracellular signal-regulated kinase 2 in T lymphocytes

1209 ***Annegret Pelchen-Matthews, Ian J. Parsons, and Mark Marsh.*** Phorbol ester–induced down-regulation of CD4 is a multistep process involving dissociation from p56^{lck}, increased association with clathrin-coated pits, and altered endosomal sorting

1223 ***Michael J. Brunda, Leopoldo Luistro, Rajeev R. Warrier, Rosemary B. Wright, Brian R. Hubbard, Molly Murphy, Stanley F. Wolf, and Maurice K. Gately.*** Antitumor and antimetastatic activity of interleukin 12 against murine tumors

1231 ***Marialuisa Sensi, Stefania Salvi, Chiara Castelli, Cristina Maccalli, Arabella Mazzocchi, Roberta Mortarini, Gabriella Nicolini, Meenhard Herlyn, Giorgio Parmiani, and Andrea Anichini.*** T cell receptor (TCR) structure of autologous melanoma–reactive cytotoxic T lymphocyte (CTL) clones: tumor-infiltrating lymphocytes overexpress in vivo the TCR β chain sequence used by an HLA-A2–restricted and melanocyte-lineage–specific CTL clone

1247 ***Sazuku Nisitani, Takeshi Tsubata, Masao Murakami, Masaya Okamoto, and Tasuku Hongo.*** The bcl-2 gene product inhibits clonal deletion of self-reactive B lymphocytes in the periphery but not in the bone marrow

1255 ***Karl Frei, David Nadal, Hans-Walter Pfister, and Adriano Fontana.*** Listeria meningitis: identification of a cerebrospinal fluid inhibitor of macrophage listericidal function as interleukin 10

1263 ***Antonius Rolink, Ulf Grawunder, Dirk Haasner, Andreas Strasser, and Fritz Melchers.*** Immature surface Ig$^+$ B cells can continue to rearrange κ and λ L chain gene loci

1271 ***Zs. Bata-Csorgo, C. Hammerberg, J. J. Voorhees, and K. D. Cooper.*** Flow cytometric identification of proliferative subpopulations within normal human epidermis and the localization of the primary hyperproliferative population in psoriasis

1283 ***Yumi Matsuzaki, Jun-ichiro Gyotoku, Minetaro Ogawa, Shin-ichi Nishikawa, Yoshimoto Katsura, Gabriel Gachelin, and Hiromitsu Nakauchi.*** Characterization of c-*kit* positive intrathymic stem cells that are restricted to lymphoid differentiation

1293 ***Joshy Jacob, Jean Przylepa, Carla Miller, and Garnett Kelsoe.*** In situ studies of the primary immune response to (4-hydroxy-3-nitrophenyl)acetyl. III. The kinetics of V region mutation and selection in germinal center B cells

1309 ***Jiangchun Xu-Amano, Hiroshi Kiyono, Raymond J. Jackson, Herman F. Staats, Kohtaro Fujihashi, Peter D. Burrows, Charles O. Elson, Subramonia Pillai, and Jerry R. McGhee.*** Helper T cell subsets for immunoglobulin A responses: oral immunization with tetanus toxoid and cholera toxin as adjuvant selectively induces Th2 cells in mucosa associated tissues

1321 ***Virginia Litwin, Jenny Gumperz, Peter Parham, Joseph H. Phillips, and Lewis L. Lanier.*** Specificity of HLA class I antigen recognition by human NK clones: evidence for clonal heterogeneity, protection by self and non-self alleles, and influence of the target cell type

1337 ***Sansana Sawasdikosol, Bishop F. Hague, Tong Mao Zhao, Florence S. Bowers, R. Mark Simpson, MaryAnn Robinson, and Thomas J. Kindt.*** Selection of rabbit $CD4^-CD8^-$ T cell receptor–γ/δ cells by in vitro transformation with human T lymphotropic virus–I

1347 ***Marc E. Surette, Rémi Palmantier, Jean Gosselin, and Pierre Borgeat.*** Lipopolysaccharides prime whole human blood and isolated neutrophils for the increased synthesis of 5-lipoxygenase products by enhancing arachidonic acid availability: involvement of the CD14 antigen

1357 ***Paul T. Massa.*** Specific suppression of major histocompatibility complex class I and class II genes in astrocytes by brain-enriched gangliosides

1365 ***Anne E. Goldfeld, Patricia G. McCaffrey, Jack L. Strominger, and Anjana Rao.*** Identification of a novel cyclosporin-sensitive element in the human tumor necrosis factor α gene promoter

1381 ***Charles C. Chu, Edward E. Max, and William E. Paul.*** DNA rearrangement can account for in vitro switching to IgG1

1391 ***Heiichiro Udono and Pramod K. Srivastava.*** Heat shock protein 70–associated peptides elicit specific cancer immunity

1397 ***Nicholas M. Valiante and Giorgio Trinchieri.*** Identification of a novel signal transduction surface molecule on human cytotoxic lymphocytes

1407 ***Alan K. Matsumoto, Don R. Martin, Robert H. Carter, Lloyd B. Klickstein, Joseph M. Ahearn, and Douglas T. Fearon.*** Functional dissection of the CD21/CD19/TAPA-1/Leu-13 complex of B lymphocytes

1419 ***Kathleen N. Potter, Yucheng Li, Virginia Pascual, Ralph C. Williams, Jr., Laura C. Byres, Myfanwy Spellerberg, Freda K. Stevenson, and J. Donald Capra.*** Molecular characterization of a cross-reactive idiotope on human immunoglobulins utilizing the V_H4–21 gene segment

Brief Definitive Reports

1429 ***Gordon R. Perkins, Jacqueline Marvel, and Mary K. L. Collins.*** Interleukin 2 activates extracellular signal-regulated protein kinase 2

1435 ***Ryutaro Kamijo, Junming Le, Deborah Shapiro, Edward A. Havell, Sui Huang, Michel Aguet, Maarten Bosland, and Jan Vilček.*** Mice that lack the interferon-γ receptor have profoundly altered responses to infection with Bacillus Calmette-Guérin and subsequent challenge with lipopolysaccharide

1441 ***Carlo Pucillo, Rosemarie Cepeda, and Richard J. Hodes.*** Expression of a MHC class II transgene determines both superantigenicity and susceptibility to mammary tumor virus infection

1447 ***Seong Hoe Park, Young Mee Bae, Hyung Joo Kwon, Tae Jin Kim, Joon Kim, Sang Jong Lee, and Sang Kook Lee.*** JL1, a novel differentiation antigen of human cortical thymocyte

1453 ***Frank Momburg, Serge Fuchs, Johannes Drexler, Robert Busch, Markus Post, Günter J. Hämmerling, and Luciano Adorini.*** Epitope-specific enhancement of antigen presentation by invariant chain

1459 ***Colin Watts and Antonio Lanzavecchia.*** Suppressive effect of antibody on processing of T cell epitopes

Volume 178 No. 5 November 1, 1993

1465 ***Eric Y. Denkers, Ricardo T. Gazzinelli, Derrick Martin, and Alan Sher.*** Emergence of NK1.1$^+$ cells as effectors of IFN-γ dependent immunity to *Toxoplasma gondii* in MHC class I-deficient mice

1473 ***Anne-Catherine Fluckiger, Pierre Garrone, Isabelle Durand, Jean-Pierre Galizzi, and Jacques Banchereau.*** Interleukin 10 (IL-10) upregulates functional high affinity IL-2 receptors on normal and leukemic B lymphocytes

1483 ***Laurie Penix, William M. Weaver, Yubin Pang, Howard A. Young, and Christopher B. Wilson.*** Two essential regulatory elements in the human interferon γ promoter confer activation specific expression in T cells

1497 ***Kevin C. Kain, Palmer A. Orlandi, J. David Haynes, B. Kim Lee Sim, and David E. Lanar.*** Evidence for two-stage binding by the 175-kD erythrocyte binding antigen of *Plasmodium falciparum*

1507 ***Kay L. Medina, Glennda Smithson, and Paul W. Kincade.*** Suppression of B lymphopoeisis during normal pregnancy

1517 ***M. Woodrow, Neil A. Clipstone, and D. Cantrell.*** p21^{ras} and calcineurin synergize to regulate the nuclear factor of activated T cells

1523 ***David B. Straus and Arthur Weiss.*** The CD3 chains of the T cell antigen receptor associate with the ZAP-70 tyrosine kinase and are tyrosine phosphorylated after receptor stimulation

1531 ***Michael Bette, Martin K.-H. Schäfer, Nico van Rooijen, Eberhard Weihe, and Bernhard Fleischer.*** Distribution and kinetics of superantigen-induced cytokine gene expression in mouse spleen

1541 ***Kazuki Ando, Takashi Moriyama, Luca G. Guidotti, Susanne Wirth, Robert D. Schreiber, Hans Jürgen Schlicht, Shao-nan Huang, and Francis V. Chisari.*** Mechanisms of class I restricted immunopathology. A transgenic mouse model of fulminant hepatitis

1555 ***Alfons J. M. Van den Eertwegh, Randolph J. Noelle, Meenakshi Roy, David M. Shepherd, Alejandro Aruffo, Jeffrey A. Ledbetter, Wim J. A. Boersma, and Eric Claassen.*** In vivo CD40-gp39 interactions are essential for thymus-dependent humoral immunity. I. In vivo expression of CD40 ligand, cytokines, and antibody production delineates sites of cognate T-B cell interactions

1567 ***Teresa M. Foy, David M. Shepherd, Fiona H. Durie, Alejandro Aruffo, Jeffrey A. Ledbetter, and Randolph J. Noelle.*** In vivo CD40-gp39 interactions are essential for thymus-dependent humoral immunity. II. Prolonged suppression of the humoral immune response by an antibody to the ligand for CD40, gp39

1577 ***Raya Mandler, Charles C. Chu, William E. Paul, Edward E. Max, and Clifford M. Snapper.*** Interleukin 5 induces Sμ-Sγ1 DNA rearrangement in B cells activated with dextran-anti-IgD antibodies and interleukin 4: a three component model for Ig class switching

1587 ***Pascale Hubert, Patrice Debré, Laurence Boumsell, and Georges Bismuth.*** Tyrosine phosphorylation and association with phospholipase Cγ-1 of the GAP-associated 62-kD protein after CD2 stimulation of Jurkat T cell

1597 ***Jean D. St. Louis, James A. Lederer, and Andrew H. Lichtman.*** Costimulator deficient antigen presentation by an endothelial cell line induces a nonproliferative T cell activation response without anergy

1607 ***Maxime Breban, Robert E. Hammer, James H. Richardson, and Joel D. Taurog.*** Transfer of the inflammatory disease of HLA-B27 transgenic rats by bone marrow engraftment

1617 ***F. L. Ierino, M. S. Powell, I. F. C. McKenzie, and P. M. Hogarth.*** Recombinant soluble human FcγRII: production, characterization, and inhibition of the Arthus reaction

1629 ***Herbert Tilg, Edouard Vannier, Gloria Vachino, Charles A. Dinarello, and James W. Mier.*** Antiinflammatory properties of hepatic acute phase proteins: preferential induction of interleukin 1 (IL-1) receptor antagonist over IL-1β synthesis by human peripheral blood mononuclear cells

1637 ***Carole G. Romball and William O. Weigle.*** In vivo induction of tolerance in murine $CD4^+$ cell subsets

1645 ***James G. McArthur and David H. Raulet.*** CD28-induced costimulation of T helper type 2 cells mediated by induction of responsiveness to interleukin 4

1655 ***Volker Brinkmann, Thomas Geiger, Sefik Alkan, and Christoph H. Heusser.*** Interferon α increases the frequency of interferon γ–producing human $CD4^+$ T cells

1665 ***Jos Domen, Nathalie M. T. van der Lugt, Dennis Acton, Peter W. Laird, Koert Linders, and Anton Berns.*** *Pim*-1 levels determine the size of early B lymphoid compartments in bone marrow

1675 ***Hongkui Deng, Raymond Apple, Michael Clare-Salzler, Sylvie Trembleau, Diane Mathis, Luciano Adorini, and Eli Sercarz.*** Determinant capture as a possible mechanism of protection afforded by major histocompatibility complex class II molecules in autoimmune disease

1681 ***Lisa R. Gottschalk, Diane M. Giannola, and Stephen G. Emerson.*** Molecular regulation of the human IL-3 gene: inducible T cell–restricted expression requires intact AP-1 and Elf-1 nuclear protein binding sites

1693 ***Apurva Sarin, David H. Adams, and Pierre A. Henkart.*** Protease inhibitors selectively block T cell receptor-triggered programmed cell death in a murine T cell hybridoma and activated peripheral T cells

1701 ***David L. Wiest, Lydia Yuan, Jane Jefferson, Patricia Benveniste, Maria Tsokos, Richard D. Klausner, Laurie H. Glimcher, Lawrence E. Samelson, and Alfred Singer.*** Regulation of T cell receptor expression in immature $CD4^+CD8^+$ thymocytes by $p56^{lck}$ tyrosine kinase: basis for differential signaling by CD4 and CD8 in immature thymocytes expressing both coreceptor molecules

1713 ***Ramanujam Rajasekar, Amy Sirr, Miriam McCarty, Gek-Kee Sim, and Andrei Augustin.*** In Mls-1^a mice, fetal-type β-gene rearrangements are frequent among self-anergic $V_\beta 6$ T cells

1725 ***Mary Beth Graham, Dyana K. Dalton, David Giltinan, Vivian L. Braciale, Timothy A. Stewart, and Thomas J. Braciale.*** Response to influenza infection in mice with a targeted disruption in the interferon γ gene

1733 ***K. Fuller, J. M. Owens, C. J. Jagger, A. Wilson, R. Moss, and T. J. Chambers.*** Macrophage colony-stimulating factor stimulates survival and chemotactic behavior in isolated osteoclasts

1745 ***Sofija Andjelić, Nada Jain, and Janko Nikolić-Žugić.*** Immature thymocytes become sensitive to calcium-mediated apoptosis with the onset of CD8, CD4, and the T cell receptor expression: a role for *bcl-2*?

1753 ***Vassiliki A. Boussiotis, Gordon J. Freeman, Gary Gray, John Gribben, and Lee M. Nadler.*** B7 but not intercellular adhesion molecule-1 costimulation prevents the induction of human alloantigen-specific tolerance

Brief Definitive Reports

1765 ***Alan H. Lazarus, Kiyotaka Kawauchi, Micha J. Rapoport, and Terry L. Delovitch.*** Antigen-induced B lymphocyte activation involves the $p21^{ras}$ and ras.GAP signaling pathway

1771 ***Nobuhiro Yuki, Takao Taki, Fuyuhiko Inagaki, Takeshi Kasama, Masaki Takahashi, Kahiko Saito, Shizuo Handa, and Tadashi Miyatake.*** A bacterium lipopolysaccharide that elicits Guillain-Barré syndrome has a GM1 ganglioside-like structure

1777 ***Frede W. Jacobsen, Ole P. Veiby, Cecilia Skjønsberg, and Sten E. W. Jacobsen.*** Novel role of interleukin 7 in myelopoiesis: stimulation of primitive murine hematopoietic progenitor cells

1783 ***Gerard F. Hoyne, Robyn E. O'Hehir, David C. Wraith, Wayne R. Thomas, and Jonathan R. Lamb.*** Inhibition of T cell and antibody responses to house dust mite allergen by inhalation of the dominant T cell epitope in naive and sensitized mice

1789 ***Yan Wu, Yong Guo, and Yang Liu.*** A major costimulatory molecule on antigen-presenting cells, CTLA4 ligand A, is distinct from B7

1795 ***Teodor D. Brumeanu, William J. Swiggard, Ralph M. Steinman, Constantin A. Bona, and Habib Zaghouani.*** Efficient loading of identical viral peptide onto class II molecules by antigenized immunoglobulin and influenza virus

1801 ***Hua Lin, Steven F. Bolling, Peter S. Linsley, Ru-Qi Wei, David Gordon, Craig B. Thompson, and Laurence A. Turka.*** Long-term acceptance of major histocompatibility complex mismatched cardiac allografts induced by CTLA4Ig plus donor-specific transfusion

1807 ***William R. Heath and Jacques F. A. P. Miller.*** Expression of two α chains on the surface of T cells in T cell receptor transgenic mice

1813 ***Fotini Paliogianni, Randall L. Kincaid, and Dimitrios T. Boumpas.*** Prostaglandin E_2 and other cyclic AMP elevating agents inhibit interleukin 2 gene transcription by counteracting calcineurin-dependent pathways

1819 ***Gek-Kee Sim and Andrei Augustin.*** The presence of an endogenous murine leukemia virus sequence correlates with the peripheral expansion of $\gamma\delta$ T cells bearing the BALB invariant delta (BID) T cell receptor δ

1825 ***Fumitaka Ushikubi, Yu-ichi Aiba, Ken-Ichi Nakamura, Tsunehisa Namba, Masakazu Hirata, Osam Mazda, Yoshimoto Katsura, and Shuh Narumiya.*** Thromboxane A_2 receptor is highly expressed in mouse immature thymocytes and mediates DNA fragmentation and apoptosis

1831 ***William C. Hahn and Barbara E. Bierer.*** Separable portions of the CD2 cytoplasmic domain involved in signaling and ligand avidity regulation

1837 ***Josef M. Penninger, Nikolaus Neu, Emma Timms, Valerie A. Wallace, Dow-Rhoon Koh, Kenji Kishihara, Christian Pummerer, and Tak W. Mak.*** Induction of experimental autoimmune myocarditis in mice lacking CD3 or CD8 molecules

Volume 178 No. 6 December 1, 1993

1845 ***Janis K. Burkhardt, Frederike A. Wiebel, Susan Hester, and Yair Argon.*** The giant organelles in *Beige* and Chediak-Higashi fibroblasts are derived from late endosomes and mature lysosomes

1857 ***María José Sánchez, Hergen Spits, Lewis L. Lanier, and Joseph H. Phillips.*** Human natural killer cell committed thymocytes and their relation to the T cell lineage

1867 ***Christiaan N. Levelt, Rita Carsetti, and Klaus Eichmann.*** Regulation of thymocyte development through CD3. II. Expression of T cell receptor β CD3ϵ and maturation of the $CD4^+8^+$ stage are highly correlated in individual thymocytes

1877 ***Maripat Corr, Lisa F. Boyd, Eduardo A. Padlan, and David H. Margulies.*** $H\text{-}2D^d$ exploits a four residue peptide binding motif

1893 ***Paola Paglia, Giampiero Girolomoni, Federico Robbiati, Francesca Granucci, and Paola Ricciardi-Castagnoli.*** Immortalized dendritic cell line fully competent in antigen presentation initiates primary T cell responses in vivo

1903 ***Glenn B. Knight, Vincent Agnello, Vincent Bonagura, Joye Lynn Barnes, David J. Panka, and Qing-Xiu Zhang.*** Human rheumatoid factor cross-idiotypes. IV. Studies on WA XId-positive IgM without rheumatoid factor activity provide evidence that the WA XId is not unique to rheumatoid factors and is distinct from the 17.109 and G6 XIds

1913 ***Roger Meurer, Gail Van Riper, William Feeney, Paul Cunningham, Donald Hora, Jr., Martin S. Springer, D. Euan MacIntyre, and Hugh Rosen.*** Formation of eosinophilic and monocytic intradermal inflammatory sites in the dog by injection of human RANTES but not human monocyte chemoattractant protein 1, human macrophage inflammatory protein 1α, or human interleukin 8

1923 ***Tomasz Skorski, Palanisamy Kanakaraj, Malgorzata Nieborowska-Skorska, Mariusz Ratajczak, Cezary Szczylik, Gerald Zon, Ralph B. Arlinghaus, Alan Gewirtz, Bice Perussia, and Bruno Calabretta.*** p120 GAP requirement in normal and malignant human hematopoiesis

1935 ***John W. Woods, Jilly F. Evans, Diane Etheir, Solomon Scott, Philip J. Vickers, Lisa Hearn, Jeffrey A. Heibein, Stella Charleson, and Irwin I. Singer.*** 5-lipoxygenase and 5-lipoxygenase–activating protein are localized in the nuclear envelope of activated human leukocytes

1947 ***Philippe Poussier, Hung Sia Teh, and Michael Julius.*** Thymus-independent positive and negative selection of T cells expressing a major histocompatibility complex class I restricted transgenic T cell receptor α/β in the intestinal epithelium

1959 ***Mark S. Anderson, Kevin Swier, Lynne Arneson, and Jim Miller.*** Enhanced antigen presentation in the absence of the invariant chain endosomal localization signal

1971 ***Jacques J. Neefjes, Günter J. Hämmerling, and Frank Momburg.*** Folding and assembly of major histocompatibility complex class I heterodimers in the endoplasmic reticulum of intact cells precedes the binding of peptide

1981 ***Debra B. Kotloff, Melvin J. Bosma, and Norman R. Ruetsch.*** V(D)J recombination in peritoneal B cells of leaky scid mice

1995 ***Thomas M. Eppinger, Jochen Buck, and Ulrich Hämmerling.*** Growth control or terminal differentiation: endogenous production and differential activities of vitamin A metabolites in HL-60 cells

2007 ***Patricia E. Roth, Lynn Doglio, Joanna T. Manz, Joo Yeun Kim, David Lo, and Ursula Storb.*** Immunoglobulin γ2b transgenes inhibit heavy chain gene rearrangement, but cannot promote B cell development

2023 ***Eric Vivier, J. Michael Sorrell, Melissa Ackerly, Michael J. Robertson, Robert A. Rasmussen, Herbert Levine, and Paul Anderson.*** Developmental regulation of a mucinlike glycoprotein selectively expressed on natural killer cells

2035 ***Joseph D. Smith, Nancy B. Myers, John Gorka, and Ted H. Hansen.*** Model for the in vivo assembly of nascent L^d class I molecules and for the expression of unfolded L^d molecules at the cell surface

2047 ***Friedrich A. Maly, Cornelia C. Schuerer-Maly, Lawrence Quilliam, Charles G. Cochrane, Peter E. Newburger, John T. Curnutte, Mary Gifford, and Mary C. Dinauer.*** Restitution of superoxide generation in autosomal cytochrome-negative chronic granulomatous disease ($A22^0$ CGD)-derived B lymphocyte cell lines by transfection with $p22^{phox}$ cDNA

2055 ***Maria H. Kosco-Vilbois, David Gray, Doris Scheidegger, and Michael Julius.*** Follicular dendritic cells help resting B cells to become effective antigen-presenting cells: induction of B7/BB1 and upregulation of major histocompatibility complex class II molecules

2067 ***A. Razzaque Ahmed, Juan J. Yunis, Deborah Marcus-Bagley, Edmond J. Yunis, Marcela Salazar, Aubrey J. Katz, Zuheir Awdeh, and Chester A. Alper.*** Major histocompatibility complex susceptibility genes for dermatitis herpetiformis compared with those for gluten-sensitive enteropathy

2077 ***Arja Kaipainen, Jaana Korhonen, Katri Pajusola, Olga Aprelikova, Maria Graziella Persico, Bruce I. Terman, and Kari Alitalo.*** The related FLT4, FLT1, and KDR receptor tyrosine kinases show distinct expression patterns in human fetal endothelial cells

2089 ***Li Lu, Mang Xiao, D. Wade Clapp, Zhi-Hua Li, and Hal E. Broxmeyer.*** High efficiency retroviral mediated gene transduction into single isolated immature and replatable $CD34^{3+}$ hematopoietic stem/progenitor cells from human umbilical cord blood

2097 ***Margaret Husta Butler, Michele Solimena, Ronald Dirkx, Jr., Adrian Hayday, and Pietro De Camilli.*** Identification of a dominant epitope of glutamic acid decarboxylase (GAD-65) recognized by autoantibodies in Stiff-Man syndrome

2107 ***Antonio J. da Silva, Ottmar Janssen, and Christopher E. Rudd.*** T cell receptor ζ/CD3-$p59^{fyn(T)}$-associated p120/130 binds to the SH2 domain of $p59^{fyn(T)}$

2115 ***Bogdan Nowicki, Audrey Hart, Katharine E. Coyne, Douglas M. Lublin, and Stella Nowicki.*** Short consensus repeat-3 domain of recombinant decay-accelerating factor is recognized by *Escherichia coli* recombinant Dr adhesin in a model of a cell–cell interaction

2123 ***Heather Secrist, Carl J. Chelen, Yan Wen, Jason D. Marshall, and Dale T. Umetsu.*** Allergen immunotherapy decreases interleukin 4 production in $CD4^+$ T cells from allergic individuals

2131 ***Kamal D. Moudgil and Eli E. Sercarz.*** Dominant determinants in hen eggwhite lysozyme correspond to the cryptic determinants within its self-homologue, mouse lysozyme: implications in shaping of the T cell repertoire and autoimmunity

2139 ***Michael Teitell, Hilda Holcombe, Hilda Cheroutre, Carla J. Aldrich, Iwona Stroynowski, James Forman, and Mitchell Kronenberg.*** The α3 domain of the Qa-2 molecule is defective for CD8 binding and cytotoxic T lymphocyte activation

2147 ***Liping Tang and John W. Eaton.*** Fibrin(ogen) mediates acute inflammatory responses to biomaterials

2157 ***Maya Kozlowski, Irena Mlinaric-Rascan, Gen-Sheng Feng, Randy Shen, Tony Pawson, and Katherine A. Siminovitch.*** Expression and catalytic activity of the tyrosine phosphatase PTP1C is severely impaired in motheaten and viable motheaten mice

2165 ***Farhad Imani, Yasuhiro Horii, Manikkam Suthanthiran, Edward Y. Skolnik, Zenji Makita, Vijay Sharma, Prabodh Sehajpal, and Helen Vlassara.*** Advanced glycosylation endproduct-specific receptors on human and rat T-lymphocytes mediate synthesis of interferon γ: role in tissue remodeling

2173 ***Philippa Marrack, Leszek Ignatowicz, John W. Kappler, Joel Boymel, and John H. Freed.*** Comparison of peptides bound to spleen and thymus class II

2185 ***Gordon J. Freeman, Frank Borriello, Richard J. Hodes, Hans Reiser, John G. Gribben, Judy W. Ng, Jinny Kim, John M. Goldberg, Karen Hathcock, Gloria Laszlo, Lisa A. Lombard, Sophia Wang, Gary S. Gray, Lee M. Nadler, and Arlene H. Sharpe.*** Murine B7-2, an alternative CTLA4 counter-receptor that costimulates T cell proliferation and interleukin 2 production

2193 ***Jérôme Pugin, Richard J. Ulevitch, and Peter S. Tobias.*** A critical role for monocytes and CD14 in endotoxin-induced endothelial cell activation

Brief Definitive Reports

2201 ***Pierette M. Appasamy, Thomas W. Kenniston, Jr., Yehua Weng, Erik C. Holt, Jennifer Kost, and William H. Chambers.*** Interleukin 7-induced expression of specific T cell receptor γ variable region genes in murine fetal liver cultures

2207 ***Marco A. Cassatella, Lucia Meda, Stefano Bonora, Miroslav Ceska, and Gabriela Constantin.*** Interleukin 10 (IL-10) inhibits the release of proinflammatory cytokines from human polymorphonuclear leukocytes. Evidence for an autocrine role of tumor necrosis factor and IL-1β in mediating the production of IL-8 triggered by lipopolysaccharide

2213 ***Gregorio Aversa, Juha Punnonen, Benjamin G. Cocks, René Waal Malefyt, Felix Vega, Jr., Sandra M. Zurawski, Gerard Zurawski, and Jan E. de Vries.*** An interleukin 4 (IL-4) mutant protein inhibits both IL-4 or IL-13-induced human immunoglobulin G4 (IgG4) and IgE synthesis and B cell proliferation: support for a common component shared by IL-4 and IL-13 receptors

2219 ***Pietro De Camilli, Annette Thomas, Roxanne Cofiell, Franco Folli, Beate Lichte, Giovanni Piccolo, Hans-Michael Meinck, Mario Austoni, Giuliano Fassetta, Gianfranco Bottazzo, David Bates, Niall Cartlidge, Michele Solimena, and Manfred W. Kilimann.*** The synaptic vesicle-associated protein amphiphysin is the 128-kD autoantigen of Stiff-Man syndrome with breast cancer

2225 ***Denis M. Hammond, Prakash S. Nagarkatti, Lisa R. Goté, Aruna Seth, Mona R. Hassuneh, and Mitzi Nagarkatti.*** Double-negative T cells from MRL-lpr/lpr mice mediate cytolytic activity when triggered through adhesion molecules and constitutively express perforin gene

2231 ***Mark R. Alderson, Richard J. Armitage, Eugene Maraskovsky, Teresa W. Tough, Eileen Roux, Ken Schooley, Fred Ramsdell, and David H. Lynch.*** Fas transduces activation signals in normal human T lymphocytes

2237 ***Richard E. Nickowitz and Howard J. Worman.*** Autoantibodies from patients with primary biliary cirrhosis recognize a restricted region within the cytoplasmic tail of nuclear pore membrane glycoprotein Gp210

2243 ***Andrea M. Cooper, Dyana K. Dalton, Timothy A. Stewart, John P. Griffin, David G. Russell, and Ian M. Orme.*** Disseminated tuberculosis in interferon γ gene-disrupted mice

2249 ***JoAnne L. Flynn, John Chan, Karla J. Triebold, Dyana K. Dalton, Timothy A. Stewart, and Barry R. Bloom.*** An essential role for interferon γ in resistance to *Mycobacterium tuberculosis* infection

2255 ***Marko Salmi, Kirsti Kalimo, and Sirpa Jalkanen.*** Induction and function of vascular adhesion protein-1 at sites of inflammation

2261 ***Michael J. James, Robert A. Gibson, Mark A. Neumann, and Leslie G. Cleland.*** Effect of dietary supplementation with n-9 eicosatrienoic acid on leukotriene B_4 synthesis in rats: a novel approach to inhibition of eicosanoid synthesis

2267 ***Author Index to Volume 178***

2285 ***Subject Index to Volume 178***